IOWA STATE UNIVERSITY
Extension and Outreach

CROP NOTES for June 10, 2020 – Flooded Crops
Iowa State University Extension Information for Northeast Iowa
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Past issues of Crop Notes are posted at:
http://www.extension.iastate.edu/winneshiek/page/crop-notes-brian-lang
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FLOODED CROPS

Yesterday's rain event dropped 2 to 5 inches across northeast Iowa. Some flooding occurred onto croplands, although most is short-term. The following are just a few highlights on early-season crop tolerances to flooding.

Corn

Young corn plants can survive only 2 to 4 days of flooding. Plant survival greatly increases if the growing point is not completely submerged, or is submerged for less than 48 hours. The warmer the weather, the shorter the survival period. *i.e.* if temperatures are greater than 77°F, plants may not survive 24 hours. While soils are saturated, nutrient uptake is reduced and plants are more susceptible to certain diseases (root rots, crown rot, Crazy top). Once water recedes, growth resumes in a few days.

Soybeans

Vegetative stage soybean plants tolerate fields flooded for 48 hours or less with little adverse impact. Fields flooded for 4 days usually causes some reduction in node development, shorter plants and some yield reductions. With 6 days of flooding, expect large yield reductions, and after 7 days significant loss of stand. Clay soils dry slower than silt loam soils and has a more significant adverse impact on the crop. Research found flooding at V4 stage showed a yield loss of 1.8 bu/ac/day on clay soils, and 0.8 bu/ac/day on silt loam soils. While soils are saturated, N-fixation will be reduced and plants are more susceptible to infection from root rot diseases (Pythium, Phytophthora, Fusarium, SDS and Brown stem rot).

Alfalfa

Alfalfa plants can usually withstand flooding for up to 3 to 4 days without damage. Alfalfa plants usually recover from silt deposits of less than 2 inches. Silt deposits over 2 inches weaken the stand, and you may need to regrade and re-establish in places. Areas of the field where the crop is silt-covered either needs rain to wash off the silt, or chop the crop back onto the field. Do not harvest it for feed due to its high ash content and possible microbial contamination. While soils are saturated, N-fixation and nutrient uptake will be reduced.

Pasture

Most perennial cool-season grasses can withstand flooding for 7 to 10 days. A possible impact of flooding on grass pastures may be excessive sediment deposits. Most perennial forages can produce new shoots and tillers if sediment deposits are less than 2 inches. If crusting occurs, and light tillage will level sediment and enhance recovery. With deeper sediment, plants can suffocate and result in substantial stand loss. In these areas, mechanical removal of the sediment is preferred to reduce plant loss and reduce the need for reseeding. Of concern with sediment deposits is possible microbial contamination. If the water flowed past manure piles or overflow of sewage treatment plants, it may contain microbes harmful to grazing animals. The general recommendation is to wait 1 to 2 weeks after the water has receded to allow microbes populations to diminish.

UPCOMING EVENTS

June 10, Four-State Dairy Nutrition and Management Conference, Virtual

This conference presents the latest research on issues concerning the dairy industry including feed efficiency, calves and transition cows. Participate live on the virtual conference. Registration fee: $75 before June 1, $100 after June 1. Live presentations and Q&A sessions will be recorded and available to participants for 60 days after the conference. Registered participants will be emailed where to receive links to the conference recordings and PDF materials. Program details are at: http://fourstatedairy.org/ or contact Jim Salfer at salfe001@umn.edu , or 320-203-6093.

June 10, How to Optimize Nutrient-Reducing Prairie Strips, Webinar

Noon webinar on how to optimize the potential value of this practice, applied research focused on improving the chances of successful implementation, maximizing the ability to provide multiple ecological benefits, and improving cost-effectiveness is needed. To participate in the live webinar, shortly before noon on June 10:

- Click the following URL, or type this web address into your internet browser: https://iastate.zoom.us/j/364284172
- Or, go to https://iastate.zoom.us/join and enter meeting ID: 364 284 172
- Or, join from a dial-in phone line: Dial: 1-312-626-6799 or 1-646-876-9923. Meeting ID: 364 284 172

The webinar will also be recorded and archived on the ILF website, so that it can be watched at any time. Archived webinars are available at https://www.iowalearningfarms.org/page/webinars CCA credits have been applied for.

June 24, 25, 26, Virtual Spring Field Day Webinar Series

In replace of the traditional face-to-face ISU Research Farm Field Day in June, ISU Extension is offering three 30-minute webinars. Each webinar will start at 8:00 AM with a 20-minute presentation followed by 10 minutes for questions. Topics to be featured each day of the webinar series are:

- June 24: Utilizing Tile Drainage to Better Manage Nitrogen and Improve Corn Yields, Mike Castellano, Professor of agronomy (CCA credit of 0.5 SW)
- June 25: Late Season Field Scouting with UAVs, Matt Darr, Professor in agricultural and biosystems engineering (CCA credit of 0.5 CM)
- June 26: Multi-tactic Approaches to Manage Herbicide Resistance, Prashant Jha, Associate professor in weed management (CCA credit of 0.5 PM).

This webinar series is free and open to anyone. It will be offered through ZOOM. There is no charge to attend, however registration is required and can be completed by going to www.aep.iastate.edu/serf After registering, participants will receive an email with instructions and a link for joining the webinar series. Once registered, you will be able to watch any or all the webinars. Participants may join through their web browser, mobile phone or tablet. Participants will need to download a free app prior to joining. Participants should join the webinar 15 minutes in advance to ensure connections and software is working correctly. If you cannot attend the live webinar, a recording of each session will be posted for viewing as soon as they are available on the ISU Extension Crops Team YouTube Channel. For more information, questions or if you need assistance with registration please contact ISU Extension agronomists Rebecca Vittetoe at 319-653-4811, or rka8@iastate.edu ; Virgil Schmitt at 563-263-5701, or vschmitt@iastate.edu ; or Josh Michel at 319-523-2371, or jmichel@iastate.edu

July 1, Soil & Water CCA Webinar for 3 SW Credits

8:00 to 11:00 AM, Webinar, $25 registration required by midnight June 29.
Topics:

- Progress and tools for scaling up adoption of Iowa Nutrient Reduction Strategy
- Tile Drainage: Reducing nitrogen fertilizer, increasing yield and implementing conservation practices

To register, go to www.aep.iastate.edu/serf-cca/ The link, password and instructions for joining the webinar will be emailed to participants after the registration is completed with payment and prior to the start of the session on July 1. Participants may join through their web browser, mobile phone or tablet. Participants will need to download a free app prior to joining. Participants should join the webinar at least 15 minutes in advance to ensure connections and software is working correctly. For more information, questions or if you need assistance with registration please contact ISU Extension agronomists Rebecca Vittetoe at 319-653-4811, or rka8@iastate.edu ; Virgil Schmitt at 563-263-5701, or vschmitt@iastate.edu ; or Josh Michel at 319-523-2371, or jmichel@iastate.edu

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